

## WHAT DOES FARM STRUCTURE IMPLY FOR FUTURE FARM POLICY?

Susan Offutt

Administrator, USDA Economic Research Service

The structure of the U.S. agricultural sector has changed throughout our history. Particularly important from a policy perspective, this evolution has left us with an agricultural sector significantly different than existed in the 1930's when the foundation of much farm commodity policy was established. Farm numbers appear to have stabilized at just over 2 million. Most farms today are small and account for only a modest share of agricultural production, even if they control three-fourths of the country's farmland. The largest farms operating on the other quarter of farmland grow more than 60 percent of food that enters commercial channels. Almost two thirds of all farm operators do not regard farming as their main occupation, but rather live on farms as a retirement or residential lifestyle choice. Many of you are by now familiar with the Economic Research Service (ERS) farm typology, that categorizes farms into homogeneous groupings based on what farmers surveyed say is their main occupation. The typology is one way of looking at the diversity that characterizes American farm structure today. Recent ERS work on the definition of a farm safety net uses the typology to take explicit account of the marked differences in aspirations and circumstances across farm households when examining how income goals might be met (Gundersen, et al., 2000).

The typology is based on the occupation of operators and the gross sales class of the farms combined. It is constructed using annual national farm survey data collected by USDA. As such, the data provide a statistically reliable picture of American farming. The typology identifies five groups of small family farms (sales less than \$250,000) and two groups of larger family farms, plus a non-family farm group (Hoppe, et al., 1999).

- Limited resource. Any small farm with gross sales less than \$100,000, total farm assets less than \$150,000, and total household operator income less than \$20,000. Limited resource farmers may report farming, a non-farm occupation, or retirement as their major occupation.
- Retirement. Small farms whose operators report they are retired.
- Residential/lifestyle. Small farms whose operators report a major occupation other than farming.
- Farming occupation/lower-sales. Small farms with sales less than \$100,000 whose operators report farming as their major occupation.
- Farming occupation/higher-sales. Small farms with sales between \$100,000 and \$249,000 whose operators report farming as their major occupation.
- Large family farms. Farms with sales between \$250,000 and \$499,000.
- Very large family farms. Farms with sales of \$500,000 or more.
- Non-family farms. Farms organized as non-family corporations or cooperatives, as well as farms operated by hired managers.

This typology now forms the basis for disaggregating ERS reporting on farm household and business performance.

The typology provides a perspective on farm structure that allows examination of its implications for farm policy. Traditionally, the farms most active in the policy debate are those that produce what are known as "program" commodities (wheat, feedgrains, cotton, rice, sugar, dairy, peanuts) addressed by the New Deal legislation that forms the foundation for today's farm legislation. Examining the characteristics

of farms by category in the typology, it is seen that the smaller family farms are more likely to specialize in non-program commodities, particularly in beef cattle, which often have low labor requirements compatible with off-farm work and retirement (Chart 1). Even when cash grain program commodities are an emphasis, these operations are generally too small to qualify for much in the way of Federal benefits. Farms with the most at stake in the agricultural policy debate are family farms whose operators are full-time farmers, not the limited-resource, retirement, or residential/lifestyle farms. Non-family farms may participate in Federal programs, too, of course, but number about 40,000 and account for only 2 percent of all farms. About one quarter of these farms receive payments under the terms of the 1996 farm bill.

Family farms run by a full-time farmer comprise roughly a third of the nation's 2.1 million farms. While many of these 750,000 farms are alike in their focus on program commodities, there are differences among them that are key in understanding their preferences for farm policy. Significantly, it turns out that farms even within the same typology category are different from one another in their ability to cover their costs of production. Perhaps not surprisingly, cost competitiveness has an important bearing on the impact that policy has on a farm. One might reasonably expect, then, that a farmer's preferences for one kind of policy or program over another would be strongly related to the expected impact of an alternative on his or her own operation.

A look at the distribution of the economic costs of wheat production provides a good illustration of the variability in financial position across farms. Considered here are farms that specialize in wheat, thus having much at stake in wheat policy outcomes and accounting for just over one third of all U.S. wheat production. Economic costs include total cash costs plus an allowance for depreciation, along with an imputed return to management and to unpaid labor of the operator and family. With the focus on long term economic viability, there are clear distinctions in financial performance across the estimated 35,000 U.S. wheat farms in operation in 1999 (Chart 2). Classifying wheat farms by economic cost per dollar of revenue, a measure of financial efficiency allows identification of three distinct groups. The most financially efficient farm businesses cover their economic costs, i.e., cost per dollar of revenue is below one. Financially efficient ("low cost") farms account for 35 percent of all wheat farms and produce just over half of all the wheat grown on specialized farms. In proportion to their production share, wheat farms in the financially efficient group receive close to 50 percent of all Federal payments to wheat farms, but for most of them, market revenue alone was sufficient to cover all costs. At the other extreme are the least efficient ("high cost") wheat farms, with costs more than half again as large as returns, cost per dollar of revenue is 1.5 or higher. These account for 33 percent of all wheat farms but for just 14 percent of wheat production. Other sources of income or equity are required for these farms to remain viable. Farms in the "mid cost" efficiency group, representing the final third of wheat farms, with costs per dollar of revenue between 1 and 1.5, account for the remaining 32 percent of wheat production and represent farms that are close to being financially viable.

These marked differences in cost structure have policy significance that is often overlooked. Most farm policy analysis is conducted in an aggregate framework, one that essentially imputes identical cost structure across farms. But this implicit assumption of homogeneity masks considerable differences in the way farms of differing cost structure experience the effects of policy (Chambers, 1992). Financially efficient producers tend to favor policy that makes the most of their cost advantage (often stemming from economies of scale) by permitting them to produce without restrictions on output, acreage or crop choice. Direct payments that provide unit returns in excess of their marginal costs encourage production beyond the point that would maximize profit in a free market. Higher cost farmers, on the other hand, tend to prefer supply controls. These farms save proportionally more than their low cost brethren for each acre taken out of production simply because their costs per acre are higher. And, when supply restrictions raise prices, more of their costs are covered by market returns. The unfettered production/direct payment policy penalizes them, relative to the low cost farms, because their costs are unchanged but market price

is driven down as low cost producers expand supply. Direct payments may or may not fully compensate for the difference between market price and their higher production costs.

These cost differences are particularly important considering elements of the farm policy debate now emerging. One would expect that low cost producers would prefer the approach of the 1996 farm bill that frames policy today. Higher cost producers, however, would prefer a return to supply management. Certainly, both these viewpoints are currently found within the farm community. This division between high and low cost producers, though, does not break down along the lines that traditionally have divided sides in the farm policy debate. First, low cost production is not the exclusive preserve of large and very large farms (Chart 3). In fact, there are sizable portions of each farm typology group that cover economic costs, although it is true that financially efficient farms are more likely to be found among the larger operations. Second, the geographic location of a wheat farm does not determine its cost position. While there are differences across regions in the distribution of high, mid, and low cost farms, there are farms in each category in each region. Chart 4 considers the entire population of wheat farms, whether specialized or not. Third, commodity specialization does not determine financial efficiency. For example, it is the case that about one third of farms that specialize in corn break even (Chart 5), similar to wheat. And, looking across the range of program commodities, all are characterized to a greater or lesser extent by the same marked differences in production costs across farms seen in the case of wheat.

These very real differences in financial efficiency and the differences they imply for the way that farmers experience the effects of policy are likely to make it difficult to reach consensus on the appropriate form of policy intervention. This is true even if all are agreed on the goal of raising farm income. Fundamentally, farm politics is about the distribution of benefits, which is why the devil is in the details of farm program design and implementation. Program designs that do not account for these differences across farms will likely not be politically sustainable. Selecting an aggregate income or revenue goal as a target for determining policy intervention without considering these distributional consequences is therefore not likely to provide a lasting farm policy solution, if in fact that is what is desired. Of course, the alternative of targeting policy, whether by cost differential or another structural farm characteristic, has not been the practice in the U.S. Here, targeting would involve the cost of identifying each farmer's place in the distribution of cost of production, requiring quite a bit of information gathering and also creating the incentive for gaming by program participants. And there could be a political cost to making clear the distribution of benefits of farm policy. Nonetheless, targeting could theoretically match policy preferences to these important structural differences across farms.

Conflict over agricultural policy might be avoided if programs could be designed so that targeting occurs voluntarily because it follows a participant's self-interest. For example, in the U.S. it has been the experience that large and very large family farms idle very little land in the Conservation or Wetland Reserve Programs. On the other hand, farms whose operators are retired or who do not regard farming as their main occupation account for close to 40 percent of the acreage in the programs although they account for only about 20 percent of all farmed acreage. To the extent that these operators are also among the relatively large portion of mid- to higher-cost farms in their categories, then, they may have come out ahead if the amount it would have cost to keep the now-idled land in production exceeds the conservation program payment. Because participation in the reserve is voluntary, low cost producers are not compelled to forego their financial advantage in commodity production. So, voluntary mechanisms may offer some hope for resolving the tension between high and low cost producers and could avoid incurring the administrative and political costs of gathering information necessary to target program delivery based on individual farm cost of production (Chambers, 1992).

The U.S. is not alone in facing very different policy preferences within a diverse domestic agricultural sector. The countries of the European Union face similar divides between more and less financially efficient farmers. These differences can help explain the European sentiment in favor of “multifunctionality,” which is the notion that farmers could be compensated for producing something in addition to farm crops or livestock, even if it is difficult to define the nature of these non-commodity outputs (such as landscape amenities or cultural values). Presumably, if payments made for non-commodity outputs were high enough, then higher cost producers might be insulated from the financial pressure they experience if market prices fall below their cost of production. Some support in this country for so-called “green” payments would appear to be predicated on the same thinking. Any “multifunctional” payment scheme would presumably have to pass muster with respect to international commitments to trade liberalization, which could prove problematic if payments are not clearly linked to a well-defined non-commodity farm output.

Confidence in highly aggregated measures of financial performance and wellbeing (such as national net farm income) ought to be tempered by knowledge of the diversity in the sector. There are systematic underlying differences between high and low cost farms. Financially efficient farmers make more effective management decisions on production practices and technologies, marketing strategies, and financing (Morehart, Kuhn, and Offutt, 2000). The skill of the operator is strongly related to his or her age and education. Still, some mid-cost farmers may also be constrained in their ability to lower input costs if their farms are sited on unfavorable soils or in areas with difficult weather or pest problems. Policy that recognizes these differences and is tailored to reducing production costs has perhaps the greatest potential to level the domestic playing field. The investments in research and education that underpin improvements in agricultural cost competitiveness also conform to international commitments to avoid distorting trade.

It is easy to say that one-size-fits-all policy is no longer appropriate for a diverse farm sector. It is another matter to find agreement on policy that recognizes those differences. However, an appreciation of the heterogeneity in farm structure and performance can lead to understanding of the roots of differences in aspirations across farm households and in program impacts across farms. To the extent that economic self-interest influences farmers’ policy preferences, more divides the farm community than ideology. But also bear in mind that agricultural policy outcomes can be influenced by considerations outside the farm sector, most notably by concerns about the Federal budget exposure created by farm programs. A constrained budget climate may lend support to advocates of supply control, as in the late 1980’s. In more free-spending times, direct payments appear tolerable. Even so, consensus will likely be hard to come by.

## REFERENCES

- Chambers, Robert G. 1992. "On the Design of Agricultural Policy Mechanisms." American Journal of Agricultural Economics 74(3):646-654.
- Gundersen, Craig, Mitchell Morehart, Leslie Whitener, Linda Ghelfi, James Johnson, Kathleen Kassel, Betsey Kuhn, Susan Offutt, and Laura Tiehen. 2000. A Safety Net for Farm Households. U.S. Dept. Agr., Econ. Res. Serv., Agricultural Economic Report Number 788. (Also at <http://www.ers.usda.gov/publications/aer788/>)
- Hoppe, Robert, Janet Perry, and David Banker. 1999. "ERS Farm Typology: Classifying a Diverse Ag Sector." Agricultural Outlook, Economic Research Service, November. (Also at <http://www.ers.usda.gov/epubs/pdf/agout/nov2000/contents.htm>)
- Morehart, Mitchell, Betsey Kuhn, and Susan Offutt. 2000. "A Fair Income for Farmers." Agricultural Outlook, Economic Research Service, May. (Also at <http://www.ers.usda.gov/epubs/pdf/agout/may2000/contents.htm>)